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ORIGINAL ARTICLES.

THE HORSE'S FOOT.

By A. Zundel.

(*Continued from page* 229.)

Corns.

Under this name is understood an alteration of the tissues underneath the hoof; of the heels of the horse's foot by lesions of the living parts in the movements of expansion of the hoof; by bruises, compressions or contusions. There is then a capillary hemorrhage which extends in ecchymosis in the hoof. A corn, then, is a bruise of the living horn at the extreme end of the branches of the sole, and especially in the laminated tissue of the fold of the bars. It is a very common disease, and one to which all horses are exposed. Some have them constantly.

Corns are seen mostly on the fore feet, and on the inside more commonly than on the external side. They are rare on the hind feet, because in the various gaits the weight of the body is carried more on the front legs and on the posterior part of the foot, while in the hind legs it is the front part which principally receives it.

I. *Divisions.*—Lafosse Sr. has distinguished them into *natural and accidental*, while Girard considers them all as *accidental*. H. Bouley designates as *essential* those which come from other than external causes. We believe that it would be better to establish the divisions on pathological and anatomical bases, and admit a *corn of the wall, or laminated*, that which has its seat in the laminæ which unites the wall to the tissues underneath, viz., in the keraphyllous and podophyllous tissues of the heels and bars, and a *corn of the sole, or velvety*, that which has its seat in the velvety tissue which unites the sole to the fleshy parts. The laminated corn corresponds exactly to the "natural" of Lafosse and to the "essential" of Bouley. It is due to lacerations in the movements of expansion of a badly made foot. The other is due to contusions. Whatever may be the adopted divisions, we, with Girard, and as admitted in practice, recognize in each category the *dry*, the *moist* and the *suppurative* corn.

II. *Etiology.*—All feet are exposed, but not all predisposed to corns. They are more frequent in heavy feet, with those where the heels are high or contracted, in which there is a motion of retraction of the hoof which interferes with the displacement backward of the third phalanx at the time of rest, and hence the lacerations are easy; besides, there is a continual pressure upon the living parts of the posterior region of the nail. Corns are frequently observed in excessively long feet, where the hoof does not receive the moisture necessary to its elasticity; it then loses its suppleness and fails to assist the internal motions of the parts contained within. It is seen whenever the hoof is too dry, the posterior diameter of the foot being then diminished. Corns are seen on weak feet, on which the hoof is too thin to resist the dilating effect of the internal structure, and spreads excessively. Wide and flat feet, with low heels, in which the inferior surface of the branches of the sole is on a level with the plantar border of the quarters and bars, are very often affected with corns. The pressure of the shoe, or the roughness of the ground produce these bruises through the sole. Here the conditions are unfavorable to the normal dilatation of the hoof; the ungueal phalanx, being unsupported by the convexity of the sole, has a tendency

to drop down lower, the tissues are easily lacerated and bruised in its displacement at the time the foot rests on the ground.

The most serious causes of corns arise from shoeing, which not only sometimes gives to the hoof a shape predisposing to that disease, but also very often is a determining cause itself of these injuries. "As long," says Hartmann, "as horses will have corns, horse-shoeing can not pass as an art, and their too frequent presence is an evident proof of our imperfect means of protection to the hoof." Without shoeing there would be no corns, and it is in its irrational methods that the true causes of these accidents originate. It is by the greater or less frequency of corns that one may judge of the state of that art in a country.

The faults are found, 1st, in the manner in which the foot is pared, or in the shape which it receives; 2d, in the fitting of the shoe; 3d, in its application. In paring the foot, the sole is often weakened, and thinned too much; it does not resist the pressure, and, at the time of resting the foot, all the weight of the body is thrown upon the point of union of the sole with the wall. Ordinarily too much has been cut away from the frog, and this not resting any more on the ground, no longer resists the pressure, and the lowering of the branches of the sole is then extreme, as proved by the experiments of Leisering. The custom of cutting the corns, and of cutting the hoof at the heels, acts in a similar manner; the posterior half of the foot is weakened, and that is the part which must carry the greatest part of the weight. One needs only to compare a foot from which the shoer has removed much horn at the sole, frog and bars, with one in which the hoof has been left alone for a long time. In making a vertical and transverse section of the two in the middle of the frog, a little in front of the angles of the sole, he will see at once how weak the point of reunion of the sole with the wall has become, the means of resistance to the pressure of the weight of the body through the third phalanx being thus diminished, and consequently a predisposition to bruises created.

The shape of the shoe also contributes to corns; an excess of concavity; a shoe which from the last nail-hole is not flat to the heels, whose branches are too much inclined, contributes to the

lateral contraction of the foot, and gives rise to corns. In this case the shoe resists the play of the horny box, and by itself, through the sole, exercises a great pressure upon the tissues underneath. Too high caulks, in preventing the resting on the frog, cause an excessive pressure on the inside of the foot, and compel it to rest on the heels and the branches of the sole, which are too much lowered. The opposite excess, when the shoe is thin at the heels, as in the Coleman shoe—when it is thick at the toe and thin at the heels—produces a similar result, because in increasing the pressure on the heels, it gives rise to bruises of the tissues through the retrossal processes, which come down too heavily. A very wide shoe, too thin, may also contribute to the genesis of corns, because then, the shoe helping, with the intensity of the reactions on the pavement or on too hard and stony roads, the shoe soon gives under the foot, and compresses the sole and tissues beneath.

The manner in which the shoe is put on may also be a cause of corns; the shoe ought to rest exclusively on the inferior border of the wall, and not touch the sole; when it is too narrow it may be a cause of contusion or of contraction; if too wide it prevents the natural expansion. It is upon horses long shod that the wrong application of the shoe as a cause of corns is observed. As a consequence of the growth of the hoof, the shoe no longer sufficiently protects the plantar border of the foot, the heels of the shoe being inward and pressing on the branches of the sole; this is especially the case when the shoe is thinned by wearing; it yields, and easily bruises the parts of the sole on which it rests; high caulks, on a branch already too short, or too thin, act the more injuriously in this way, because, not being concentrated on the projection of the caulk, the branch gives way sooner, and presses still more on the heels.

The shoe becomes an indirect cause of corns, when hard substances, as stones or dry earth, are found between its superior and inferior face on the sole, or between the frog and the internal border of the branches of the shoe; this is a secondary cause, which was formerly considered of great importance.

The work of horses has a great influence; corns being very

frequent in horses which work on pavements and stony and hard roads. They are rare in country horses, but common in those of great cities; a rapid gait contributes to their development on account of the great pressures on the ground. The seasons have also an influence, dry and warm weather depriving the hoof of its moisture, and by preventing its elasticity of motion, increasing the effect of pressure on the tissues.

Emigration has been considered a cause of corns. Horses coming from the north of Germany are mentioned as having been rapidly affected by them after being in large cities. But if the change too suddenly made from soft to dry bedding is an effective cause, the mode of shoeing can also be considered as a stimulating cause. The same is true with respect to the African horses, which are generally free from the disease in their native country, but frequently suffer with them when brought to France and submitted to a mode of shoeing so different from that of the Arabs.

III. *Symptoms.*—The ordinary symptoms of corns are noticed in the abnormal position of the leg at rest, in the lameness and the sensibility of the region.

When lame with a corn the horse carries the leg forward of the plumb line, and keeps it semi-flexed at the fetlock; he tries to relieve the painful region by resting; sometimes he manifests his pain by pawing and moving his feet from forward backwards, pushing his bedding under him. The lameness is not characteristic; it varies greatly in intensity, from a slight soreness to lameness on three legs. It is generally proportioned to the intensity of the disease. However, there are horses so accustomed to their corns that they do not go lame, while others are very much so for a trifling injury. Sometimes it is intermittent, and diminishes when the suppuration has made its way between hair and hoof. The sensibility of the heel—seat of a corn—is discovered by an exploration with the blacksmith's nippers. Sometimes it is made known by pressure of the fingers, the cases varying, of course, according to the severity of the disease. There is often heat, especially at the coronet, which may be tumefied, particularly so when the corn is of a complicated suppurative character. To

obtain an accurate view of the disease the foot should be well pared, and this operation may be greatly facilitated by the application of poultices for twenty-four or forty-eight hours previously.

It is only by the objective examination and the pathological anatomy, so to speak, of the corn that the moist or suppurative variety can be distinguished from the dry; and we shall find either a simple ecchymotic spot, or a complete disintegration of tissues.

(*To be continued.*)

RESUMED STUDY IN ANTHRAX.

CONSIDERED FROM THE POINT OF VIEW OF SANITARY POLICE.

By Prof. Dessart.

(*Continued from page* 234.)

D.—Anthrax of Swine.

(*a*) *Without external localizations—Apoplectic Anthrax* *—Sudden deaths of swine, attributed to apoplectic anthrax, are quite common in ou country †.

The disease is recognized at post-mortem investigations. The affection lasts, however, but a short time—two or three hours—and exhibits symptoms analagous to those which accompany carbuncular typhus of cattle and sang de rate of sheep. The subject becomes stupefied, and soon experiences great prostration. Its walk is staggering, and has general tremblings and bloody vomitings. The peripheric temperature is sensibly lowered, especially that of the extremities, and then follow grinding of the teeth, convulsions and death.

(*b*) *Anthrax with external manifestations—Gangrenous Erysipelas.*—The symptoms are about the same as those of the preceding form, in the cases where the disease does not too rapidly prove fatal. The evolution of the symptoms is always, however,

(*). Carbuncular Apoplexy of Roll.

(†). Belgium.

less rapid, affected animals often resisting beyond twelve hours. There are rare cases when it lasts as long as the second or third day. The sick animals are, nevertheless, generally affected with paresia, or paraplegia, from the first hours of the disease. But what, from a symptomalogical point of view, characterizes the disease is the gangrenous erysipelas—that is, the appearance in the course of the disease of spots, at first red, then purplish, upon different parts of the body and legs, principally about the neck, chest, belly, fore-arm and thigh. These increasing, join together and form gangrenous spots, covered with phlyctens. At the same time the subcutaneous cellular tissue of the regions where they exist becomes inflated and the skin sloughs off in large pieces.

Antracoid Angina.—This form of anthrax in swine is slower in its development. Ordinarily the subjects afflicted succumb only after the second or third day. Independently of the ordinary symptomatic manifestations of anthrax, as prostration, anorexia, dyspnœa, cyanotic skin and mucous membranes, grinding of the teeth and flaccidity of the ears and caudal appendix, anthracoid angina is characterized by the development of a carbuncular tumor about the inferior portion of the parotid region on one or both sides. This tumor is generally not voluminous. It rapidly assumes a purplish or blackish aspect, and its sensibility at first is very great. The hairs which cover it are grouped together, and become hard, and their pale color contrasts strongly with the dark coloration of the skin. In some cases there is, properly speaking, no tumor, but instead a black, limited spot.

It sometimes happens that other localizations appear on the tongue, which become black and gangrenous (glossanthrax), or extends to the whole buccal cavity (stomanthrax). In other circumstances the affection is complicated with anthracoid angina. There is then a purplish and diffuse tumefaction of the neck, with the ordinary character of carbuncular enlargements. This tumefaction extends sometimes to the chest, shoulder and to the fore-arms.

III.—Diagnosis of Anthrax After Death.

The above described symptoms establish the diagnosis of an-

thrax during life. They give to it a character of positive certainty if the blood, or any other liquid taken from the patient, contains bacterias or their germs. The use of the microscope, with a sufficient magnifying power, is indispensable, if we would recognize the presence of these organisms.

But the rapidity with which many of the animals die often renders it impossible to distinguish the symptomatic disorders. It is therefore only after death that the diagnosis can be established.

The *post mortem* diagnosis of anthrax is based upon the external signs exhibited by the cadavers; upon the anatomo-pathological alterations of the fluids and tissues; the presence of the bacteridies in the economy, if looked for before putrefaction has begun; or of their corpuscle-germs, if already phenomena of putrid decomposition exist; upon anamnesis; at last, in case of doubt, upon experimental inoculation. Let us consider these different points.

1. *Cadaver.*—The body of the animal which has died of anthrax decomposes rapidly, especially if it has not been *emptied* immediately after death. It also cools off quickly, and becomes tympanitic in a few minutes. The natural openings, such as the mouth, nostrils, vulva and anus remain open, and allow the escape of bloody matters—blackish, mixed with mucuosities and excrementitial products. Apparent mucous membranes are infiltrated, ecchymosed, and, at times, strongly marked by wide, black maculation. The hairs of the body, neck and tail are easily pulled out. The external localizations are found with their already described aspects. Where they exist there is subcuaneous emphysema, due to the formation of gasses, the beginning of the putrefaction of the histological structure and of the fluids moistening them.

2. *Alterations of fluids and tissues.*—The blood is much changed in its physical, chemical and histological qualities. It is black, adhesive, and incoagulable, and is always destitute of fibrin. The proportion of carbonic acid is enormously in excess. The hermaties, altered in form, are as if torn upon their borders or outlines, and they gather more together. Bacteridies appear,

ordinarily in great numbers, under the microscope. The urine, lymph, as well as the abundant serous, or gelatiniform exudations which lubricate the tissues and the carbuncular localizations, internal as well as external, have a reddish or brownish color, and are nearly always very rich in bacteridies. The diseased *lymphatic glands*, especially those closed at the points where the introduction of the microbs has taken place, are blackish or brownish. Their structure is soft and disorganized, and, so to speak, saturated with those organisms. The *subcutaneous and interorganic cellular tissue* is œdematous in large places, and often the seat of great bloody extravasations, more or less circumscribed. Generally the *muscles* are also full of bloody serosity, and upon transverse section, present hemorrhagic centers of very dark color. Sometimes entire groups of muscles are softened, and present a black or dark red aspect, while others are very pale and easily torn, as if they had been boiled in water. In the majority of cases, these various alterations are especially apparent in the anterior parts, as the maxillary space, the throat, neck or chest. The parts between, and those posterior, are not, however, entirely free from them. Indeed they are sometimes more diseased than the anteriors. The *heart* is also diseased. The clots which it contains are always black and of little consistency. The endocardium is almost always ecchymotic and maculated with the coloring matter of the blood. The myocardium is soft and pale. The pericardium presents alterations analagous to those of the endocardium. They are also found in the serous membrane lining the blood vessels. The *capillaries* are gorged with blood and are sometimes upon large surfaces closed by true embolisms, due to the accumulation of the bacterides. The nervous apparatus is also diseased. It offers lesions easily observed; congestion and inflammation of the meninges, of the encephalic substance, and sometimes of the encephalo-rachidian axis almost in its whole length. Similar lesions are found in the lymphatics of the sympathetic system. The alterations of the *viscera* proper are not less numerous or remarkable. These organs, especially the liver, spleen and kidneys, are, in most cases, gorged with blood and softened. The spleen, especially in sheep and cattle, is ordinarily

much increased in size. It is often reduced to a kind of black pulp, which would run out through the peritoneal sheaths were it not for its fibrous envelope. The intestine is frequently the seat of infiltration, diffused or circumscribed. The lungs also present alterations similar to those of the abdominal organs.

It is scarcely necessary to remark that all these morbid lesions are not always found in all cadavers. Neither do they exist to the same extent in all, the difference being due to the greater or less rapidity of the termination of the disease. They depend, also upon the type of the affection, leaving aside the rapidity of its march. Evidently, apoplectic cases will leave less marked lesions than those observed in other cases.

3. *Bacteridian Microbs.*—It is principally in the state of mycelium, or rods, that they are found in the economy. When germs are seen under the microscope, it is with the characters already described.

In order to verify the presence of the microbs, fluids already in process of putrefaction must be absolutely rejected, for as soon as the phenomena of putrid decomposition begin to take place, the *bacillus anthracis* dies and breaks up, and gives place to the *bacillus subtilis*, the microbe of putrefaction. It is very difficult, if not impossible, to establish the distinction between the germ corpuscles of the latter and those of the former, which, contrary to the rods, preserve perfectly their vital resistance, even in a medium in full putrid fermentation.

The criterion of anthrax upon the cadaver, we have already said, is the presence of the bacterides in the mediæ of the organism. But, to avoid in practice all unwarranted interpretation, it is necessary to add that *post mortem* researches, having for their object the discovery of the characteristic rods, are valuable only when made upon the cadaver a very short time after death.

No special preparation is necessary for the examination of the blood of an animal supposed to be carbunculous. A very small quantity is placed between two glass slides upon the stage of the instrument. This is quite sufficient. Bacterides are seen in the mycelium state, placed between the blood corpuscles, sometimes agglomerated in great numbers, inter-crossed so as to form a thick

network; at other times isolated or in small groups.

4. *Anamnesis.*—The knowledge that other morbid cases, considered as being of a carbuncular nature, have been found in the district, is, in the absence of the microbs, noticed at the proper time—an element of diagnosis whose importance cannot be overlooked.

5. *Experimental inoculation.*—This remains as a last means to banish all doubts in cases where the bacteridian microbe has failed to be discovered. The rabbit, on account of its low cost and of its great receptivity, is the best animal to use for that purpose. The operations may be made in different ways. Two principally deserve mention, on account of their simplicity and facility of execution. They are also very practical. In one, the base of the ear or the flat of the thigh is pricked with a lancet dipped in the suspected blood; in the other the blood, lymph, or serous exudations of suspected animals is introduced into the subcutaneous tissue. It is necessary in all cases, and we insist on this point, to be sure that the fluids of inoculation are still fresh. If this recommendation is neglected, septicæmia, instead of the carbunculous disease, will be produced.

(*To be continued.*)

CASE OF POISONING FROM STRYCHNIA.

By W. H. Hoskins, D.V.S.

On the 4th of April I was summoned in great haste to see an animal some distance from my home. After endeavoring to find out the history and some of the symptoms, with but little or no success, I started off. On reaching my patient, which proved to be a handsome cream-colored gelding, 16 hands high, coming 7 years old, I then learned that he had been in excellent health for some time past, and was known to have been in that condition on the evening of April 3d, when he was last seen by the owner. On the morning of the 4th he was noticed to be in great pain, refusing to eat or drink, and when the owner, a few hours after,

attempted to give him a drench of whisky, he failed, finding his jaws barred as it were, from all entering; his condition grew worse until noon, when I reached him. On entering the stable I found him standing with the fore and hind extremities very far apart; the neck was protruded, his face presenting a very anxious appearance; he pawed with the fore feet alternately, and struck at the abdomen very violently with the hind ones; the muscles of the neck were noticed to twitch very much, and he would occasionally utter a low groan; he was profusely salivated, the saliva running from both commissures of the mouth in streams; the eyes were dull, but their mucous membranes, and of the nose likewise, highly injected, the nostrils being widely dilated; his tongue appeared very red and swollen; the ears and extremities were very cold; his pulse beat very hard and about seventy to the minute; his respirations were very difficult and about fifty in number; his temperature a little above normal; upon pandiculation he would not give any whatever. Some of these symptoms came on every few minutes, becoming more and more violent. At times he would rush forward in his stall, placing his fore feet in the manger, and then back to the end of his halter strap, after which there would appear a period of rest. Feeling somewhat uncertain as to what these symptoms indicated, though tetanic in character, I told the owner I would prefer to wait until the following morning before making a diagnosis, though feeling pretty positive in my own mind that it was a case of pseudo tetanus, superinduced by an overdose of strychnia; for note the absence of the throwing out of the membrane nictitans, which could not be forced out by violent motions; the profuse salivation; the severe abdominal pains; the spasms coming on every few minutes, during which the muscles of the neck were noticed particularly to twitch; his tail remaining pendant, though a general stiffness of the body prevailed; the sudden appearance of these symptoms and their aggravated character from the first. True, I must acknowledge that our learned professor on Materia Medica has told us that in poisoning by strychnia we never have any trismus, but here it was quite well marked.

I had the horse moved to a large stall in one corner of the

stable; this was darkened as much as possible; he was warmly clothed, and ordered that perfect quietness might prevail. I ordered belladonna and alcohol in his water, with a bucket of gruel containing chloral hydrate and gentian, but he never took any of either. I allowed but one person to go near him to attend his wants.

The next morning I found him worse, every symptom seeming to be aggravated in character, with no appearance of any new ones. I then made a diagnosis of strychnia poisoning, and was informed that they had lost another horse, about a year before, with similar symptoms, but no post-mortem was held. On my first visit I made an examination of his food, watering trough, &c., but found no traces of any poison. On the morning of the 6th he was found dead, and I was telegraphed for to hold a post-mortem. I examined again, as I had done before death, for some wound or mark of violence, but failed to find any. Almost as soon as death took place rigor mortis set in, and this remained for a number of hours after. I removed the limb on the off forward side, he having fallen on the near side; finding the blood vessels of the skin and bronchial region very much congested, the blood being very dark and thick in character; the same condition in the right lung of a more marked type, while the left lung was thoroughly engorged, partly from gravitation. Upon entering the abdominal cavity I found the immediate cause of death to have been from rupture of the colon at the supra-sternal flexure, which probably occurred during one of the spasms. The stomach proved to be empty, with the exception of a few dead bots, the lining membrane showing but one or two ulcerated patches. The first eight or ten feet of the small intestine was a deep red color from inflammation, and its mucous membrane showed many large patches of ulceration. I did not go into the brain or spinal cord, feeling that it was unnecessary, where the lesions corresponded so well with my diagnosis of poisoning by strychnia.

USE OF THE TROCAR AND CANULA IN TYMPANITIS OF THE HORSE.

By W. F. Derr, V.S., (Wooster, Ohio).

In the last fifteen months I have used the trocar a great dea and with good success, and thinking it might be of some benefit to some of the readers of the Veterinary Review, I will report a few cases.

On the 10th of May, 1880, I was called to see a grey horse twelve years old, the property of S. S. Shillings, proprietor of the Wooster Cab Line. The animal had been suffering for about an hour by the time I arrived at the stable. The animal was down and in terrible agony, abdomen distended with gas to its utmost capacity; respiration accelerated and very laborious; pulse feeble and indistinct; body cold and clammy, and ears and legs in a similar condition. Eructations of gas from the stomach by the way of the mouth, indicated that the stomach as well as the intestines were occupied with gases.

I got the animal on his feet, and administered a drench of turpentine 1 oz., with am. carb. 2 drs., in a pint of linseed oil; gave an injection of warm water, but did not succeed in getting him to expel any fœces or gases, as he expelled the injection as soon as we administered it, on account of the great distention of gasses in the intestines. In about fifteen minutes I tried to administer another drench, but he threw it back by the way of the nostrils.

I now made up my mind to try the effect of the trocar and canula. I introduced the instrument about an equal distance from the anterior spine of the ilium and transverse process of the lumber vertebra and ribs on the right side. On withdrawing the trocar the gas escaped freely, giving instant relief. Thinking I now had the case under control, I gave a small dose of aloes, as I had given him oil before, combined with a carminative to rouse up the digestive organs; the horse appearing easy, I left for about an hour, to attend to another patient, but on my return found the animal in a worse condition than before; the owner had inserted a handful of salt in the rectum, thinking it might expel the gases

which had again accumulated. The rectum was inverted to the extent of about five inches, and the animal straining all the time to expel the gasses, and also on account of the irritation the salt produced, it was impossible to keep the animal on his feet even long enough to pass the trocar, so I introduced it while he was lying down, about an inch below the first puncture. I got immediate relief. I now gave a drench of hyposulph. of soda, which had the effect of neutralizing the gasses so as to give no further trouble, the animal going to his usual work in a few days without the least trouble from the punctures that were made.

Case 2. Bay mare about six years old; property of J. A. Thomas, Wooster, was admitted into the infirmary for acute indigestion, with symptoms similar to the case just related. Punctured her three different times on the right flank with good success. This animal had a small abscess form in a week after the operation, which I opened and used a carbolic wash, but was not taken off work during the treatment of abscess, doing light work about town. She made a good recovery.

Case 3. Bay colt, two years old, property of Mr. Ross, farmer, had an attack of indigestion, due to an over-feed of oats on the night of April 25th. I was asked to prescribe for the case, but not to see it. Prescribed a dose of turpentine and am. carb. On the morning of 26th, he was brought to the infirmary in the following condition: A debilitated animal, with a pulse of about a hundred, weak and indistinct, pupils dilated, abdomen greatly distended, breathing laborious, ears drooping, inversion of the rectum; in fact he looked to be in a dying condition. The first thing I did was to give relief with the trocar by two punctures in the right flank. From the first puncture I got no gas; gave stimulants, had him rubbed down well and blanketed, and he began to improve for about an hour, when the gasses again began to accumulate. I tried various kinds of remedies, but failed to get the desired effect, so I again resorted to puncturing, with the desired effect. He gradually began to improve, and had no further trouble except a small abscess, which I treated the same as case No. 2; he made a good recovery.

Case 4. One of my own driving horses, seventeen years old, which I have drived eight years without ever being sick presented

symptoms of colic on the evening of May 16th. After giving a colic drench she seemed relieved, so that I paid no more attention to her, but left her for the night. About two o'clock I was aroused by the man sleeping in the barn saying the mare was bad. I got there as soon as I could, and don't think I ever saw a case in the condition she was. The abdomen was distended to its utmost capacity, the walls of the abdomen were rigid as a plank, and respiration in consequence of the great pressure on the diaphragm and lungs were very laborious, amounting to almost a hundred a minnte; pulse indistinct, eyes glassy and protruding, a cold, clammy perspiration all over the body, pupils so dilated that the mare would run against the walls like a blind horse. Her agony was so intense that I did not try to administer any medicine, but at once plunged the trocar into the right flank; the gas escaped very freely, and had the effect of giving immediate relief; gave a drench of hyposulph. soda and a stimulant, with a purgative, which had the effect of neutralizing the gasses so as to cause no further trouble. This mare made a good recovery, and was in harness four days afterward.

In conclusion, I would say in my opinion, puncturing the intestines of horses is safe if performed early, while there is plenty of vitality left in the animal. In a great many cases that are punctured the practitioner waits to do it as a last resort, and the animal dies, and he condems the operation, when in all probability the animal would have died without the puncture. I think if we are going to have success in cases of this kind the operation must be performed early, and not as a last resort.

INJURY TO A MARE FROM COVERING.

By N. S. Townshend, M.D., (Columbus, Ohio).

A five year old mare, of good height but short quarters and light of body and limb, was in June last served by a large Percheron stallion. After the covering the mare strained considerably, and made frequent attempts at micturition. In a day or two the vulva became much swollen, and a discharge of bloody mucus

was observed from the vagina. For nearly a week the mare was feverish and gave evidence of pain when compelled to move. During this time she received no medical attention. When seen by your correspondent she manifested intense suffering; the pulse was 96 a minute and weak, the respiration rapid, the abdomen was somewhat distended by fluid; she was evidently sinking, and died in two or three hours. A careful post-mortem brought to view a vagina small and short, intensely inflamed, but nowhere ruptured. Inflammation had extended by the urethra to the bladder, from the vagina to the uterus, and from the latter to the peritoneum generally. Peritonitis had terminated in effusion, so that several gallons of water were found in the abdominal cavity.

EDITORIAL.

UNITED STATES VETERINARY MEDICAL ASSOCIATION ANNIVERSARY MEETING.

The nineteenth meeting of the United States Veterinary Medical Association, appointed for September 20th, took place as announced and after a session of several hours duration, adjourned. The State of New York was represeneed by quite a large number of members. Massachussetts had two representatives, and Connecticut and New Jersey one each, making a total of about twenty-five. The Association however, has members residing in Pennsylvania, Rhode Island, Maine, Ohio, Illinois, Nebraska, Texas and Colorado. Massachusetts furnishes some ten or twelve members, and New Jersey counts five or six. It thus appears that while some sixty-five representatives of the profession can claim membership in the Association, but twenty-five were present, and of these four only belonged to States outside of New York.

The day was passed almost entirely in the discussion of articles of the by-laws, and with the exception of a meagre report from one of the committees, and the reading of a few remarks upon the

Nova Scotia cattle diseases, nothing, absolutely nothing, was done worthy of the Association—the only body of its kind existing in the United States.

Why is this so? Why is it that the Association, meeting but twice a year, but for which the anniversary meeting takes place in September; why is it that such poor result is obtained? If we look at the work which other similar associations do, at similar meetings, what must be our feelings—and what can be said of the Association by those who are its enemies, or by those who are interested in the doings of all veterinary societies? It is not because the Association is deficient in men capable of doing good work. It is not that all of the members are not anxious for its welfare. Then where is the cause of this failure in the success of the meeting?

After giving careful thought to the subject, we are brought to the conclusion that the fault lies principally with its officers. Not on any one especially, but on all. The various committees alone ought to furnish a sufficient amount of interesting material for discussion and for instruction. But what is done? They are appointed by the President, and possibly that is all that comes of it. Perhaps the Secretary notifies them of their appointment, but what more? Are they ever reminded of such appointment? Are they notified that a report will be expected from them, either separately or collectively, through their Chairman? We know of cases where the Chairman of a committee overlooked his position and never thought that he had to make a report, until the very evening before the day of meeting. Cannot the Committee on Disease collect sufficient material all over the country for an excellent report on the general condition of health and disease among our domestic animals? If the members of that committee are appointed, say one in Massachussetts, one in Pennsylvania, and one in Ohio, can they not gather the elements of a report which will be attentively listened to for several hours? And the committee on Intelligence and Education—is not their field of labor and investigation sufficiently wide to furnish materials for an excellent report? And the Committee on Prizes, is it not their duty to endeavor to stimulate the ambition of all, and obtain some original

articles for competition? And, * * And, * * But let us not find fault with the officers, but rather let us also ask every member in particular, if he has done his whole duty towards the Association.

It is not the desire of finding fault which impels us to offer these remarks, nor is it with any other desire than to see the Association assuming, in the United States, the position which it may justly claim. We feel that the United States Veterinary Medical Association is one day to become the veterinary body *par excellance* of the profession in the United States, and it is this conviction which sustains us in declaring to its members what we think to be the truth, however unpalatable it may be—truth that we are willing to confess may also apply to ourselves. And if we have felt justified in thus addressing our associates, it is with the hope that efforts will be made in the proper direction to reform the old methods of holding our meetings, and that in the future they will be made worthy of the members and worthy of the noble profession to which they belong. In the selection of a new President the Association has secured the services of a good man and worker, and one whom we hope will appreciate the importance of his position and the good he can do to the profession, by urging his constituents to fill up the measure of their duties as well as to avoid the wrong which may follow any neglect or forgetfulness of the obligations he has assumed.

AMERICAN VETERINARY COLLEGE—WINTER SESSION, 1881-'82.

The regular winter session for 1881–'82 of the above institution will commence on October 3d. Dr. N. J. Roberts will deliver the opening address.

ARMY VETERINARY MEDICINE.

ITS HISTORY; THE PRESENT CONDITION OF THE ARMY VETERINARY SURGEON; HIS RIGHTS AS A REPRESENTATIVE OF A SCIENTIFIC PROFESSION AND WHAT IS REQUIRED BY THE GOVERNMENT TO ESTABLISH AN EFFICIENT VETERINARY DEPARTMENT.

By A. A. Holcombe, D.V.S., Veterinary Inspector U. S. A.

To the President and members of the United States Veterinary Medical Association.

Gentlemen:—I have the honor to submit to you, the representatives of the veterinary profession in America, in behalf of myself and army colleagues, a statement which I trust will appeal to your sense of justice and secure for us your most able influence in effecting such changes in the Army Veterinary Department as shall prove conducive to the interests of the government and of veterinary science.

HISTORY.

The history of veterinary medicine in the U. S. Army is one that, fortunately, cannot be written in full, owing to the scarcity of data on the subject; but that it is replete with the barbarous practice of ignorant empirics needs no confirmation beyond the silent testimony offered by the many remaining victims of unnumbered vivisections. They are present, living monuments to the ingratitude of a nation that exacts from the brute a full complement of labor without vouchsafing in return that care for its physical welfare which is due to the one and advantageous to the other.

Prior to the breaking out of the late civil war in 1861 there were but few mounted soldiery in the army, and in the organization table no reference is made to the veterinary surgeon, and it seems that no provision was made for the care and treatment of sick animals in government service. According to the testimony of old soldiers who served in the Dragoons, it fell to the lot of the shoeing-smith or farrier not only to adjust the shoes, but to attend also the sick and disabled and to superintend the

administration of such remedies as could be had upon the prescription of any and all who would presume on making a suggestion. Usually the treatment was determined not so much by the nature of the complaint as by the drug that happened to be nearest at hand.

The first recorded reference I can find to the position of army veterinary surgeon is in General Order No. 16, dated May 4th, 1861, from the War Department, where, in giving the organization of "One additional regiment of cavalry," under Par. 2, one veterinary sergeant is named in connection with the other sergeants. Par. 3 of the same order says: "The veterinary sergeant shall receive the pay and allowances of sergeants of cavalry." According to Par. 1388 of the Revised Army Regulations of 1863, the veterinary sergeant received $17 pay per month, while the allowances consisted of rations, fuel, a mount and forage.

But a change was soon made in this regard, for in General Order No. 73 of 1863, the Act of Congress relating to the Army Establishment is published, in Par. 6, Sec. 37, of which appears the following: "And each regiment (cavalry) shall have one veterinary surgeon, with the rank of a regimental sergeant-major, whose compensation shall be $75 per month." As will be observed the title "sergeant" was dropped and "surgeon" substituted. By whom the appointments were made, or what constituted the necessary qualifications no mention is made, so the inference is that the whole matter was placed at the discretion of the commanding officers of the various cavalry regiments. That the government officials appreciated the grave defects of the adopted system of caring for the public animals is seen by the Quartermaster General's Order No. 21 of 1863, in which he says: "It is not too much to say that the government has already been obliged to replace many thousands of horses and mules which, with proper understanding of, and attention to, their duties on the part of the Quartermasters, would have been at this momont in serviceable condition. * * * * Neglect and imbecility on the part of those in charge ruin them and tax the treasury." This was strong language indeed, but I doubt if the Quartermaster General appreciated fully what was needed to effect the de-

sired reform. A few educated veterinarians in the army at this time could have done more for the advancement of the profession, and the appreciation of its importance by the Government, than by a lifetime in civil practice. But the opportunity passed unnoticed. A few months later in 1863, a change regarding the veterinary surgeon was effected, for, in General Order No. 259 I find: "Veterinary surgeons of cavalry under the Act of March 3d, 1863, will be selected by the Chief of the Cavalry Bureau upon the nomination of the regimental commanders.

"These nominations will be founded upon the recommendation of the candidate by a regimental board of officers to consist of the three officers present next in rank to the commander of the regiment.

"The names of the candidates so recommended and nominated to the Chief of the Bureau of Cavalry, will be submitted by him to the Secretary of War for appointment. A record of the appointments so made shall be kept in the Adjutant General's office."

This was an important move in so far as the veterinary surgeon was concerned, for it served to give him a status in the army, and a compensation somewhat commensurate in the importance of the services rendered. It was the first time the Government had offered inducements which might possibly tempt an educated veterinarian to accept an army position. The next order having any important relation with the veterinary surgeon was issued in 1864, when provision was made for supplying the army with "horse medicines." It would be interesting to know who comprised the board that recommended the medicines found in the following:

"Gen. Order No. 195" (dated May 12th, 1864). "The subjoined standard supply table of horse medicines, with regulations for the government of the Veterinary Department of the Army, prepared by a board of officers convened by Special Order No. 137, current series, from this office, (Adjutant General's), have been adopted, and are published for the information and guidance of all concerned.

"I. STANDARD SUPPLY TABLE.

(Articles and quantities for 100 horses for three months, Hospital Service only are given, as the whole table would occupy

too much space—*Auth*). "Aloes, 2 ozs.; alcohol, ½ gal.; asafœtida, ½ lb.; alum, 2 lbs.; blister liquid, 1 qt.; blue stone, 1 lb.; borax, 3 lbs.; calomel, ¼ lb.; castile soap, 20 lbs.; ground flaxseed, 16 lbs.; hartshorn, ½ gal.; lunar caustic, ½ oz.; laudanum, 2 qts.; simple cerate, 5 lbs.; mercurial ointment, 1 lb.; Mustang liniment, 4 bots; olive oil, 1 gal.; oil, linseed, 1 gal.; oil, turpentine, ½ gal.; Powell's liniment, 4 bots; resin, 1 lb.; salts, 4 lbs.; sulphur, ½ lb.; saltpetre, 2 lbs.; sweet spirits of nitre, 1 qt.; sugar lead, 2 lbs.; tar, ½ gal.; tartar emetic, ½ lb.

"DRESSINGS.

Adhesive plaster, 2 yds; muslin (coarse), 20 yds.; red flannel (coarse), 4 yds.; sponge, 1½ lbs.; silk for ligature, ½ oz.

"I.—INSTRUMENTS.

"Abscess knife (2 blade), 2; ball forceps, 2; corkscrews, 2; funnels, 2; graduate glasses, 2; mortar and pestles (iron), 2; needles, 1 doz.; probes, 2; rowling needles, 2; scales and weights, 2; syringes, 2; spring lancets, 2; straight scissors, 2; spatulas, 2; trocars, 2; tenaculums, 2.

"II.—REGULATIONS FOR THE VETERINARY DEPARTMENT.

"1. The standard of horse medicine for the army in the field, and in hospitals, is the supply table.

"This table will not be deviated from except in extreme emergencies, and then only for hospital use, when the reasons must be clearly and satisfactorily stated.

"2. Requisitions will be made quarterly, and in duplicate, conforming strictly to the standard supply table.

"3. Quartermasters will hold veterinary surgeons strictly responsible for the instruments issued to them, and, in case of loss through carelessness or damage from neglect, the cost price of the instruments so lost or damaged will be charged to them.

"4. Quartermasters responsible for medicines and dressings will take care that these articles are used for their legitimate purposes, and will hold the veterinary surgeons strictly accountable for their loss or damage through neglect, etc."

During the next two years immediately following the publica-

tion of this table no change of any importance was made regarding the Veterinary Department; but in 1866 the following was enacted by Congress: "An act to increase and fix the military peace establishment of the U. S. Army," approved July 28, 1866, and published in General Order No. 56, Adjutant General's Office, of the same year. "Sec. 3. Four regiments of cavalry shall be added to the six already existing (two of which are to be colored), and to have the same organization as is now provided by law for cavalry regiments, with the addition of one veterinary surgeon to each regiment, whose compensation shall be $100 per month."

This law, as will be seen, gave these four regiments two veterinary surgeons apiece, so that in the division of the various companies to different posts one surgeon remains at headquarters while the other is assigned to the battalion of next importance. Seniority of rank of the veterinary surgeons serving in these regiments is determined by the dates of their warrants from the Secretary of War.

In 1868 the Government takes steps toward securing reliable medicines for the use of the Veterinary Department, for General Order No. 4 of that year says: "To insure a greater degree of purity and excellence of medicines and articles required for the veterinary service of the army, the Secretary of War directs that the Quartermaster's Department hereafter purchase such supplies from the Medical Department.

"In special cases, where such medicines as are not furnished by the present supply table are required, the Quartermaster's Department is authorized to issue the same in small quantities upon requisitions approved by the post commander."

At a later date in this year appeared an order which will speak for itself—General Order No. 73, August 21, 1868: "The following order has been received from the War Department, and is published for the information of all concerned: 'Mr. Alexander Dunbar, V. S., has been employed by the War Department to give instruction to the farriers, veterinary surgeons and officers of the army under the following joint resolution of Congress, approved July 28, 1866: "That the Secretary of War be authorized and directed to contract, on such terms as he may

think fair and reasonable, with Dr. Alexander Dunbar for the use by the Government of the alleged discovery of the said Dunbar of a mode of treatment of the diseases of the horse's foot, and for his services for one year in instructing the farriers of the army in such treatment, the amount agreed upon to be paid out of the fund already appropriated for the purchase of horses or general support of the army.

"He will be ordered to give clinical lectures upon his system, first at Washington City, and will in the course of the year of his engagement be ordered to the principal military posts at which large numbers of horses and mules are kept.

"He will be obeyed and respected accordingly."

Had Congress known anything of veterinary surgery as a science, it is safe to say no such imposition could have been practiced on its credulity by one devoid of the simplest knowledge of surgery and the diseases of the feet of the horse.

No further change in the Veterinary Department or its interests occurred until 1873, when the following appeared in General Order No. 84, dated August 20:

"I. Hereafter the Quartermaster's Department will furnish the authorized horse medicines and instruments for the mounted artillery, as well as for the other horses of the army; and such medicines and instruments as are now on hand in charge of the Ordinance Department will be turned over to such officer or officers as the Quartermaster General may designate to receive them."

General Order No. 93, dated November 11, 1875, contained further information in this regard: "The allowance of horse medicines and dressings * * * will be issued quarterly to the company commanders of light artillery and cavalry.

"The number of animals for which the articles are required will be stated in the requisition. Issues will in no case be made in excess of the allowance, etc." * * * * * * * * * *

"Veterinary instruments will be issued and accounted for as heretofore."

In conjunction with this order was published the blank form of "Abstract of Horse Medicines and Dressings Issued," and a blank form of "Requisitions for Horse Medicines and Dressings."

In 1876 (General Order No. 31, dated April 12,) the supply table, with its various revisions and the orders pertaining thereto, issued subsequent to its first publication in 1864, was published "for the information and guidance of all concerned."

The next order pertaining to the Veterinary Department was published May 31, 1877 (General Order No. 52). Its contents were as follows: "By direction of the Secretary of War, General Order No. 259 of August 1, 1863, from the War Department, is revoked and the following substituted: Veterinary surgeons of cavalry regiments authorized by Section 1102, Revised Statutes, amended by the Act of February 27, 1877, will be appointed by the Secretary of War upon the nomination of the regimental Board of Officers, to consist of the three officers present next in rank to the commander of the regiment.

"The nominations of candidates so recommended, accompanied by the report of the Board in each case, will be transmitted by the regimental commander to the Adjutant General of the Army."

It will be observed that in no instance has any reference been made to the necessary qualifications of the candidate for army veterinary honors.

Under the order last quoted above, anyone might present himself to the Board for examination. There were no regulations for determining the extent and scope of the examinations, nor was the Board required to report to the Secretary of War the nature of their investigations into the candidate's knowledge of veterinary surgery or other subjects. Unfortunately, as it seems to me, the order of May 31st, 1877, as well as Order 259 of 1863, was so constructed as to exclude from the Board of Examiners, probably in the majority of instances, the very officers fully qualified to determine the applicant's knowledge of at least the general principles of surgery. I refer to the surgeons. Considering then that the Examining Boards were generally composed of officers who, unless in exceptional instances, had little or no knowledge of veterinary surgery beyond the simpler manipulations, it is not a matter for surprise that the qualifications of the individuals employed by the government in the capacity of Veter-

inary Surgeons up to this time, were of the most nondescript order. During the period these orders were in force the positions were awarded, as a rule, to shoeing-smiths, farriers, or peripatetic quacks, who had imbibed empirical ideas of the most radical sort regarding the efficacy of certain remedial agents in the treatment of disease, and of the value of their own very limited knowledge. Generally, and with but a few honorable exceptions, these individuals were as guiltless of an acquaintance with the simplest rudiments of veterinary medicine as a science, as they were of the English language, the usages of genteel society, or the real responsibilities of the positions they tried to fill. As a matter of course, the value of veterinary medicine to the Army was very generally inferred from the nature of the service rendered by these men, and the veterinary profession, as a whole, was measured accordingly by this false standard. I have seen letters of recommendation, held by these individuals, from officers high in rank, which described the possessors as "veterinary surgeons of great merit." As well might they have been called "eminent military scientists."

But, notwithstanding the adverse circumstances with which army veterinary surgery was surrounded and hampered in its growth, a few zealous workers held fast to their faith that it would some day receive a proper recognition, and in 1879 had their hopes and work in part awarded by the appearance of the following:

"GENERAL ORDERS No. 36.

"Headquarters of the Army, Adjutant-General's Office,
"WASHINGTON, March 27, 1879.

"I. The report of the Board of Officers appointed by paragraph 12, Special Orders No. 183, from this office, dated August 24, 1878 (organization modified by par. 7, Special Orders No. 211, from this office, dated October 1, 1878), 'To prepare and recommend a standard supply-table of veterinary medicines and instruments for use in the Army,' having been approved by the Secretary of War, and its recommendations adopted, it is, by his direction, hereby published for the information of the Army and for the guidance of all concerned, and will take effect from July 1st, 1879.

"Requisitions and estimates for veterinary supplies will hereafter be made in conformity with the allowances provided for in the Standard Supply Table, contained in the report of the Board.

"JEFFERSON BARRACKS, Mo., Nov. 15, 1878.

"The Board of Officers convened at Jefferson Barracks, Mo., by virtue of paragraph 12, Special Orders No. 183, Headquarters of the Army, Adjutant-General's Office, dated August 24, 1878, and paragraph 7, Special Orders No. 211, Headquarters of the Army, Adjutant-General's Office, dated October 1, 1878, has the honor to submit the following report on the subject of 'A Standard Supply-Table of Veterinary Medicines and Instruments for Use in the Army.'"

"STANDARD SUPPLY TABLE."

[The table covers too much paper to be given in full; therefore, each article is named, and the quantity for 100 horses, hospital service, for a period of three months is given.—*Author.*)

"*Medicines.*—Acid arsenious (arsenic), 2 oz.; acid carbolic, crystallized, 14 oz.; acid carbolic, for disinfection, 2 lbs.; acid muriatic, 16 oz.; acid nitric, 8 oz.; acid salicylic, 3 lbs.; acid tannic, 14 lbs.; aconite, tincture of, 1 lb.; alcohol, 4 gals.; aloes, 20 oz.; alum, 2 lbs.; ammonia, acetate of, 2 lbs.; ammonia, arom. spts. of, 2 lbs,; ammonia, solution of, 3 gals.; ammonia, carbonate of, 4 lbs.; antimony and potassa, tartrate of, 2 oz.; atropia, sulphate of, $\frac{1}{8}$ oz.; belladonna, alcoholic ext. of, 4 oz.; blistering liquid, 2 qts.; borax, 2 lbs.; camphor, 3 lbs.; catechu, 1 lb.; castor oil, 2 gals.; chalk, prepared, 2 lbs.; chloroform, purified, 3 lbs.; cinchona bark, powd., 2 lbs.; cinchona, fluid ext. of, 4 lbs.; colchicum seed, $\frac{1}{2}$ lb.; collodion, $\frac{1}{2}$ lb.; copper, sulph. of, 4 oz.; cosmoline, veterinary, 15 lbs.; ether, sulphuric, 4 lbs.; ether, spirit of nitrous, 2 qts.; flaxseed meal, 40 lbs.; ginger, powd., 3 lbs.; iodine, 3 oz.; iron, sulph. of, $\frac{1}{2}$ lb.; iron, tinct. of the chloride of, 2 lbs.; jalap, $\frac{3}{4}$ lb.; lead, acetate of, 2 lbs.; linseed oil, 2 gals.; magnesia, sulph. of, 24 lbs.; mercurial ointment, 2 lbs.; mercury, biniodide of, 2 oz.; mercury, corrosive chloride of, 2 oz.; mercury, mild chloride of, 2 lbs.; morphia,

sulph. of, 1 oz.; nux vomica, alcoholic ext. of, 4 oz.; olive oil, 2 gals.; opium, powd., 1 lb.; opium, tinct. of, 3 qts.; pepper, Cayenne, ground, 1 lb.; potassa, chlorate of, 2 lbs.; potassa, nitrate of, 4 lbs.; potassium, iodide of, 3 lbs.; quinia, sulph. of, 6 oz.; rhubarb, powd., ½ lb.; rosin, 4½ lbs.; silver, nitrate of, crystals, 1 oz.; silver, nitrate of fused, 1 oz.; soap, Castile, 30 lbs.; soda, bicarbonate of, 4 lbs.; soda, hypophospite of, 1 lb.; sulphur, washed, 2 lbs.; sulphur in rolls, 2 lbs.; turpentine, oil of, 2 gals.; zinc, chloride of, ¼ lb.; zinc, sulphate of, ¼ lb.

Dressings.—Bandages, 4 inch, 48; catgut, carbolized, for ligatures, 8 yds.; flannel, red, coarse, 8 yds.; lint, patent, 4 lbs.; oakum, 35 lbs.; pencils, hair, 1 doz.; silk ligature, 1 oz., sponges, coarse and fine, each, 2 lbs; ticking, (muslin, twilled), 8 yds.; tubing, rubber ¼-inch, 3 yds.

Instruments.—Bone-saw, small, 1; Catheters, gum, with stylet, 2; cork-screws, 2; dissecting case, 1; drenching horn, gutta-percha, 2; firing irons, point and line, each 1; funnels, rubber, 2; funnels, tin, 2; foot instruments, a set; graduate glasses, glass, 6-oz., 1; graduate glasses, glass minim, 1; Hobbles casting, 1; hones, 1; measures, tin, set, 1; needles, surgeons', 24; needles, for wire sutures, 12; panniers, to be filled from stock on hand, similar in make to those of the Medical Department, 1; pill-tiles, 1; pocket-case (see list), 1; *post-mortem* case, 1; probangs, 2, pieces of whalebone, 1; saddle-bags, physicians', for small detachments, to be filled from stock on hand, (not used in hospital service); scales and weights, prescription, 1; scales and weights, shop, 1; scissors, curved, 1; scissors, straight, 1; slings, suspending, 1; spatulas, 2; speculum, mouth, 1; syringes, hypodermic, 1; syringes, rubber, 2-oz., 1; syringes, rubber, 5 oz., 1; syringes, rubber, 16 oz., 1; thermometer, clinical, 1; tooth-chisel, 1; tooth-forceps, large, 1; tooth-forceps, small, 1; tooth-rasps, 1; tracheotomy-tube, self-retaining, 1; trephine, 1; urinometer, 1; blank-books, half-bound, 4 quires, 1; memorandum-book, 1; ink, black, 2-oz. bottles, 2; paper, filtering, round, 10 inch, 2 pkgs.; paper, litmus, blue and red, each, 1 sheet; paper, writing, cap, 2 quires; paper, writing, note, 2 quires; paper, writing, note, 2 quires; pencils, lead, 6; pens, steel, 24; penholders, 3, bone forceps, 1.

Books.—The Farmer's Veterinary Adviser, Law's, 1; ; Pharmacy, Parrish's, 1.

Contents of Pocket-Case.—1 three-bladed fleam; 1 scissors, flat; 1 scissors, curved; 1 artery forceps; 1 long-shanked, probe-pointed bistoury; 1 trocar; 1 finger-knife; 1 seton-needle, closing in handle; 1 frog seton-needle, in two parts; 1 seton-needle, in three parts; 1 scalpel; 1 director; 1 retractor; 1 straight bistoury; 1 dressing forceps; 1 porte caustic; 1 tenotomy knife; 1 tenaculum; 6 assorted drawing-knives; 3 lancets; 16 needles, straight; 6 needles, half-curved; 1 needle-holder (Russian); 2 oz. saddlers' silk; 1 oz. silver suture wire, No. 26 (about 18 yds. 1 ft. 10 in)."

"Only the articles and the quantities thereof that are actually needed to be placed upon the requisition."

This table is believed to be usually ample and sufficiently varied for ordinary practice, but in order to provide for the necessities of epidemics and to indulge, as far as practicable, individual preference and training, a special requisition of articles not on the Supply Table, with an explanation of the nature of the emergency or case rendering it necessary, may be forwarded to the Quartermaster-General for his action. Veterinary medical supplies and instruments for hospital use to remain in the hands of the Post Quartermaster, to be issued from time to time and in such quantities as are needed by the companies. The instruments to remain in the custody of the Post Quartermaster. Post Quartermasters to take up all instruments and veterinary medical supplies, and report, when possible, to whose account they are to be credited.

A Veterinary Surgeon is to visit all the companies of the regiments to which they belong from time to time, to instruct the farriers and enlisted men in the proper and humane care of the horse, in order to the prevention of and treatment of diseases, especially to teach the anatomy and pathology of the foot. He should illustrate his instructions by dissections and specimens, to show the nature and uses of all parts of the horse's foot; and he should also teach the principles and practice of horse-shoeing. It would be economy to have a Veterinary Surgeon at every post

where there are a considerable number of public animals, say four companies of cavalry, or the same number of other public animals.

A room for the safe storage of veterinary instruments and medical stores and the compounding of medicines should be provided, and the Veterinary Surgeons and Farriers should be encouraged to make and preserve collections of specimens obtained from *post mortem* examinations, illustrating the anatomy and pathology of the horse in order to popularize and disseminate a knowledge of those important subjects in the Army.

(*To be continued.*)

SANITARY LEGISLATION.

FRENCH LAW UPON THE SANITARY POLICE FOR ANIMALS.

(*Continued from page* 245.)

CHAPTER II.

INDEMNITIES.

SEC. 17. Owners of animals destroyed on account of typhus, by virtue of Section 7, shall receive an indemnity equal to three-quarters of the value of the animal before the disease.

Owners of diseased animals, destroyed for the cause of contagious pleuro-pneumonia, or that have died from the inoculation, by virtue of Section 9, will receive an indemnity regulated as follows:

Half of the value before the disease, if they are recognized as affected by it;

Three-quarters, if they have only been contaminated;

The total value if they have died from the inoculation of contagious pleuro-pneumonia.

This indemnity allowed cannot exceed 400 francs for half of the value; 600 francs for the three-quarters; and 800 francs for the whole value.

§ 18. No allowance will be granted to owners of animals imported from foreign countries, destroyed because of contagious pleuro-pneumouia within three months following their landing in France.

§ 19. When the remains of an animal destroyed because of bovine pest, or of contagious pleuro-pneumonia, has been authorized for use by consumption, or any industrial purpose, the owner is required to report the produce of the sale of such remains.

This produce belongs to the owner; if it exceeds the portion of the value left to his charge, the indemnity due him will be reduced a corresponding amount.

§ 20. Before the execution of the order to destroy, the valuation of the animals by the official veterinarian and an expert named by the owner, shall take place.

If the owner fails to name an expert, the official veterinarian shall act alone.

A report shall be made by the experts, the Mayor and Justice of Peace also signing and reporting their opinion of the case.

§ 21. The claim for indemnity must be made to the Minister of Agriculture and Commerce, within three months from the date of slaughter, under penalty of forfeiture.

The Minister may order a revision of the valuation made by virtue of Section 20, by a commission to be designated by him.

The indemnity fixed by the Minister shall be final, unless appealed before the Council of State.

§ 22. Violations of the provisions of the present law, or regulations adopted for its execution, will be followed by forfeiture of the indemnity prescribed in Section 17.

The decisions of the Minister shall be final unless appealed before the Council of State.

§ 23. No indemnity will be allowed to owners of animals destroyed for contagious diseases other than bovine-typhus and contagious pleuro-pneumonia, under the special provisions contained in Section 9.

CHAPTER III.

IMPORTATION AND EXPORTATION OF ANIMALS.

§ 24. Animals of the equine, asinine, bovine, ovine, caprine and porcine species are at all times subject to inspection at the expense of the importers, at the time of their entrance into France, either by land or by water.

The same measure may be applied to animals of other species,

where, as sequence of their importation, the introduction of a contagious disease is to be feared.

§ 25. The bureaus of customs and imports, open to the importation of animals exposed for sale, are named by decrees.

§ 26. The Government may prohibit the admission into France or order the quarantine of animals capable of communicating contagious disease, or of all objects presenting the same danger.

It may order the destruction at the frontier, without indemnity, of diseased animals, or of such as have been exposed to contagion; and may generally adopt any measures which fear of the invasion of a disease may render necessary.

§ 27. The sanitary measures, to be taken at the frontier, are ordered by the Mayors of the rural communes, by the Commissaries of Police in the frontier railroad depots, and in the sea-ports, according to advice from the official veterinarian in charge of the district.

In the absence of the action of these authorities, the officers of customs may be called upon for assistance.

§ 28. The municipalities of sea-ports, open to the importation of cattle, shall furnish special quarters for unloading, with all necessary facilities; as well as a building to receive the animals placed in quarantine for sanitary reasons, which must have been accepted by the Minister of Agriculture and Commerce.

§ 29. The Government is authorized to take the necessary measures to prevent the exportation of animals affected with contagious diseases.

CHAPTER IV.

PENALTIES.

§ 30. Infractions of the provisions of Sections 3, 5, 6, 9, 10, 11, paragraphs 2 and 12, of the present law, shall be punished by imprisonment from six days to two months, and a fine of from 16 to 400 francs.

§ 31. The following offenders shall be subject to from two to six months' imprisonment and fines of from 100 to 1,000 francs:

1st—Those who in spite of the measures of the administration shall have allowed their infected animals to communicate with others;

2d—Those who have sold or exposed for sale animals known to be affected or suspected of contagious disease;

3d—Those who, without permit from the authorities, have left unburied or have knowingly bought cadavers or remains of animals of any description which have died of contagious diseases, or which have been killed because of their having been affected with bovine typhus, anthrax, glanders, farcy or hydrophobia.

4th—Those who, even before the decree of interdiction, shall have imported into France animals known by them to be affected with contagious diseases, or which had been exposed to contagion.

§ 32. The following persons shall be subject to imprisonment for from six months to three years, and a fine of from 100 to 2,000 francs:

1st—Those who shall have sold or exposed for sale the flesh of animals known by them to have died of contagious disease, of whatever nature; or which had been destroyed as affected with bovine typhus, anthrax, glanders, farcy or hydrophobia;

2d—Those who shall have been guilty of the offences referred to in the preceding sections, if from that cause a contagion has spread amongst other animals.

§ 33. Contractors of transports, who shall have neglected the duty of disinfecting their material shall be subject to a fine of from 100 to 1,000 francs, and shall be punished by imprisonment from six days to two months, if from this neglect a contagion has spread amongst other animals.

§ 34. Violations of the present law, not specified in the above sections, shall be punishable by fine of from 16 to 400 francs.

Violations of the regulations of the departments of public administration, designed to facilitate the execution of the present law, shall, according to the degree of the offence, be subject to a fine of 1 to 200 francs, to be imposed by the District Magistrate at his discretion.

§ 35. In cases of conviction for violation of any of the provisions of the present law by the official veterinarian or any other person holding any official position whatever under its authority, the punishment shall be double the maximum penalty imposed upon unofficial persons.

§ 36. Section 463 of the Penal Code is applicable to all the cases arising under the various Sections of the present Chapter.

CHAPTER V.

GENERAL PROVISIONS.

§ 37. The expenses of slaughtering, burying, transport, quarantine and disinfection, as well as all other expenses arising under the execution of the present law, shall be charged to the owners of animals, or persons having them in charge.

In case of their refusal to obey the injunctions of the administrative authority, it will be charged against their official accounts.

The expenses of these operations shall be certified in an order by the Mayor, the collection and execution to be assigned to the Sub Prefect. Persons resisting their enforcement shall be proceeded against before a Justice of the Peace.

The disinfection of railroads, trucks, &c., prescribed by section 16, is left in charge of the company; expenses of disinfection are fixed by the Minister of Public Works, after conference with the companies.

§ 38. A service of epizootics is established in each department, in order to secure the execution of the present law.

Expenses of this service * * * *

§ 39. Communes where fairs and markets are held, shall be required to have a veterinarian appointed for the sanitary inspection of animals brought there. They may repay themselves by special taxes on the animals.

This is obligatory. * * * * *

§ 40. The regulation of the public administration, for the execution of the present law, necessitates the organization of consulting county committees on epizootics, attached to the Departments of Agriculture and Commerce.

The information obtained by the minister relating to epizootics, shall be communicated to the committee who give their advice as to the measures required.

§ 41. * * * * * *

PATHOLOGICAL PHYSIOLOGY.

INJECTIONS OF RABID VIRUS INTO THE CIRCULATION DO NOT PRODUCE HYDROPHOBIA, AND SEEM TO GIVE IMMUNITY.

By M. V. GALTIER.

The investigations of the author have brought him to the conclusion that:

1. Injections of rabid virus into the veins of a sheep will not give rise to symptoms of rabies, and seem to confer immunity against that disease.

2. Rabies can be transmitted by the injection of rabid matter, and, though the place where the inoculation in this case takes place has not yet been determined, it is nevertheless proved that there is danger of contracting the disease by all persons or animals in which, under whatever circumstances, the rabid virus may be introduced into the digestive organs.—*Academie des Sciences.*

TUBERCULOUS INFECTION BY THE LIQUIDS OF SECRETION AND THE SEROSITY FROM VACCINE PUSTULES.

By M. H. TOUSSAINT.

Saliva, nasal mucus and urine of tuberculous animals may transmit tuberculosis. The proof has been given by Mr. Villemain, who experimented from man to animals with the first two liquids.

It is with the secretions taken from a cow that the following experiments were made:

The inoculation was made with the lancet, at the base of the ear of three rabbits, with the clear and viscous fluid exuding ordinarily from the nostrils of the tuberculous cow. Two weeks after, the rabbits had local tubercles, and already shewed an increase in the consistency and size of the parotid ganglion; the disease followed its ordinary course. The animals were killed on the seventieth day, and their lungs were found filled with tubercles, most of them in a state of grey granulation. A few had some caseous matter in the center.

Similar experiments were made, on the same day, with the saliva of the diseased cow, taken from the mouth. They gave the same result, though the lesions of the lungs were less advanced.

An injection of a few drops of urine from a hog was made at the base of the ear of a nearly full-grown rabbit. After a few weeks he begun to lose flesh, and death occurred after four months with caseous pneumonia.

Important conclusions can be drawn from these experiments in view of the hygienic measures proper to be taken in public slaughter-houses.

I made some experiments upon the same tuberculous cow, which seem to be of some importance in view of the danger of contagion which may result from the use of vaccine which has been obtained from a tuberculous subject.

The same cow was inoculated with the vaccine obtained from a child in perfect health, and of healthy parents. Seven punctures were made around the vulva. Several days after, the pustules were developed. On the seventh or eighth day, these having become umbilicated, I inoculated the serosity to four rabbits and one pig. Two rabbits, killed two months later, showed all the lesions of tuberculosis, local, ganglionary and pulmonary. The pig, at that time, presented one local tubercle, well developed. He will be killed later, but generalizations are already evident, and he is undoubtedly in a tuberculous condition.—*Academie des Sciences.*

VACCINATION AGAINST SYMPTOMATIC ANTHRAX.

By Arloing and Cornevin.

The discovery of M. Pasteur, relating to the attenuation of deadly virus to such an extent as to render it a vaccinal virus, was not destined to wait long before finding its application, not only in chicken cholera, but in anthrax, as other experiments of Pasteur & Toussaint have proved.

The discovery made by MM. Arloing and Cornevin differ from the other, as instead of the attenuated they have used the

deadly virus itself to transmit immunity. Indeed, in the form of anthrax, known as *symptomatic*, which is so essentially different from the bacteridian charbon, they have succeeded in giving immunity by the direct injection of the natural virus into the general circulation, through the veins, where its activity is reduced to such an extent that its entrance into the organism gives rise only to slight febrile phenomena which soon disappear. It is known that the injection of the similar virus into the subcutaneous tissue, or in the muscular structure proves very rapidly fatal.—*Gazette Medicale.*

COMPARATIVE PATHOLOGY.

IN RELATION TO THE IMMUNITY OF ANTHRAX.

By M. H. Toussaint.

According to Mr. Toussaint the duration of immunity is in direct proportion to the severity of the first attack, or, in other words, to the energy of the vaccine, and in inverse ratio to the resistance of animals. In proof; in August, 1880, lambs of 10 to 20 months, as well as old ewes, were inoculated with very energetic virus, too much so indeed, as it killed several of the young subjects. In those which survived, as well as in the ewes, all the phenomena following the inoculation were very severe, but all have preserved their impunity to the present time—July, 1881.

At the same epoch, other lambs and ewes were inoculated with a much attenuated virus. The effect was very mild in the ewes, but was more serious in the young animals. They all resisted an inoculation made a month later, while a few of the ewes, reinoculated four months afterwards, died. The lambs to this day have preserved their immunity.

Heredity of immunity exists for the lamb. Seven ewes vaccinated in May, July and August, 1880, had lambs subsequently. Those inoculated in the first month of their life, as well as their mothers, resisted the disease.

This last is an important fact, as it seems to show that it is sufficient to inoculate the females to obtain indemnity for the flocks.—*Gazette Medicale.*

UPON A NEW PROCESS OF VACCINATION OF CHICKEN CHOLERA.

By M. H. Toussaint.

Every one is acquainted with the interesting discourses of Mr. Parteur relating to chicken cholera, and how, by the continued action of oxygen, he has succeeded in producing in this so deadly virus, such effects of attenuation as to allow, with safety, of its use in vaccination.

The following arguments seem to indicate that the attenuation may be obtained in other conditions.

Three years ago I presented the Academy with observations upon a disease with microbes, which I assimilated to those studied in 1864 and 1865, by M. Davaine, differentiating it from anthrax, and which M. Leplat and Jaillard had taken for sang de rate.

In the month of October, 1878, I saw chicken cholera and had already in my mind assimilated that disease with the one I had observed in my experiments in the beginning of the year. The microbs of these two affections had a perfect resemblance, and showed a similar action in the rabbit. Further experiments of the same nature, made in 1879 and 1880 decided me to publish the paper under the the title of "*Identity of acute experimental septicæmia and chicken cholera,*" in which I recapitulated the facts demonstrated by five series of experiments, in proof that the manifestations of chicken cholera could be produced by inoculations of the microb of septicæmia.

Recent facts have appeared confirmatory of these results. I have just made two series of experiments—one with old carbuncular blood, which was sent to me, the other with a rabbit, killed very rapidly by the inoculation of blood taken twenty hours before from a tuberculous cow.

Rabbits inoculated with the carbunculous blood died in seven or eight hours with septicæmia. This altered blood contained a microbe nearly similar to that of chicken cholera. Inoculated

to pigeons, it killed them first in four or five days, then in three, again in two or in one day. Inoculated from the pigeons to the hens, the same results were obtained, to wit, that the first hen died in four or five days, and the others successively in three, in two and in one. In making these experiments I was careful to compare the lesions of chicken cholera with those resulting from inoculation. I had asked M. Parteur to send me the microbe of that disease, and I am constrained to say that the closest observations failed to establish any difference in the symptoms, the lesions of the skin, of the muscles and of the blood, nor in the cultures of these parasites. These experiments were made in different places and with special instruments for each case.

I then inoculated directly to hens the blood of the rabbits killed by speticæmia. The result was an attenuated virus, slight lesions of the skin and connective tissues underneath; sometimes slight alterations of the muscular fibres, but the hens in all the cases recovered, and became refractory to the cholera. The cultures of the blood of septicæmic rabbits act in the same manner. In this case the inoculation merely produces in hens a slight cicatrix of the skin, round and regular.

With this variety of septicæmia of the rabbit, which has no relation to that described by M. Pasteur, Joubert and Chamberlain in a previous note, a practical vaccine might be made which would greatly tend to arrest our most serious epizootics. A single inoculation in the tip of the tail would be all that is required in order to avoid depreciation in value. When septicæmia has killed the hen, after passing through the pigeon, its excessively violent properties, in reference to those two species, are preserved, even after inoculation to the rabbit.

The determining causes of epizootics in chicken cholera are yet unknown. It has been supposed that putrefying substances might give rise to it; hence the adoption of measures of cleanliness and disinfection which have been recommended. The microbe which killed the first hen in an epizootic has certainly come from an anterior generation which had killed others; but how was it perpetuated? Do not the facts which demonstrate the development of septicæmia in putrid matter throw some light on that etiology?

Is not the supposition admissible, that chickens find the conditions of their infection by cholera in the putrefying organic substances which may serve as a medium of culture to the germs of septicæmia which are in suspension in the air, with those of putrefication?—*Gazette Medicale.*

AMERICAN VETERINARY COLLEGE HOSPITAL.

REPORTS OF CASES.

By R. H. Harrison, D.V.S. House Surgeon.

THE REMOVAL OF A LARGE FUNGOID GROWTH AT THE ELBOW BY THE ELASTIC LIGATURE.

In a recent German Review, the application of the ligature as a means of removing tumors at the elbow, was highly recommended. The modus operandi consists in applying cords at the base of the tumor, removing and tightening them each day, until the sloughing of the tumor takes place. In a French editorial on the subject the manipulation was highly commended, but it was considered that an elastic ligature would be much better than the cord, as this would obviate the necessity of repeating the application every day, and would have the same desired result. In an article on the subject, by Dr. Coates, in the August number of the Review, the use of the elastic ligature was fully described and several cases reported illustrating the beneficial results of its use. Since then we have used it again, and although the tumor was successfully removed, and the patient is now doing well, still certain objections to its use were indicated.

The case referred to was an aged black gelding used for trucking, and valued by his owner as an old and trusty servant. He had a large fungoid growth at the left elbow, larger than a man's head, and measuring twenty-five inches in circumference at its base; it was irregularly rounded and presented a large uneven granulating surface, bleeding to the touch, but not painful to the patient. It interfered considerably with locomotion and was a most disgusting eye-sore.

Late in one afternoon an elastic ligature was applied to the base of the growth, and the animal was tied up so he could not bite himself. Within half an hour the patient became very uneasy, continually pawing, and trying to rid himself of the source of annoyance. When seen the next morning the skin had not been cut through, considerable constitutional disturbance was manifest, the patient was uneasy, off his feed, and had a temperature of 103°; pulse, 48; respiration, 24; the external ulcer was covered with antiseptic dressing powder to keep the flies away, and the carbolic spray was used at the point of ligation—towards evening the patient was less uneasy, though as yet there was no sign of the skin dividing.

After four days the skin was cut through and the ligature rapidly cut through the soft tissues, so that in two days after, the whole tumor came away, leaving a very large granulating surface even and healthy looking. The patient had lost much flesh during the removal of the growth, but afterwards rapidly improved. The after treatment consisted in cauterization of the edges of the wound with nitrate of silver and dressing powder over the granulations. After six weeks treatment the ulcer had contracted an inch and is now healing slowly from its edges.

The use of the ligature in this case was an experiment to see how it would work when the tumor was so large. The objections to its use are well pointed out.

The animal suffers great pain, especially when the amputation begins so tardily. Also, as in this case, when the weather is warm, the sloughing mass has an intolerable odor, and there is a great annoyance from flies, the whole mass becoming very shortly alive with maggots. But more than all, is the large granulating surface that is left, which heals so slowly. In the case reported it will take at least two months more for the wound to cicatrize. And it seems to me that the removal of large tumors, such as the one referred to in this case, would be more advantageous to the owner if performed by the ordinary mode of simple dissection.

POST MORTEM OF THE BLOODHOUND AFFECTED WITH EPITHELIAL CANCER OF THE TAIL AND ANUS.

(Sequlæ of the case reported in the August number of the REVIEW.)

This patient was lately returned to us in a very emaciated condition, covered with bed sores, and so weak as not to be able to stand up without assistance. The owner reported that when he was discharged before he had improved rapidly in spirits and general condition until about three weeks previously, when he began to be dull and listless and grew thin, although he ate ravenously. A large abscess had developed at the elbow of the off fore leg, had opened and was now nearly healed.

Examining the animal carefully, extreme debility and emaciation were manifest, the temperature slightly elevated, the pulse weak, and respiration normal, although principally thoracic. The seat of the former tumors was free from any new growths, but a slight discharge of pus was noticed issuing from the anus. The rectum was emptied of impacted fæces and by introducing the finger, a tumor the size of a hen's egg could be felt superiorly in the middle of the pelvic cavity.

The dog was kept for two days under observation, and during that time would lie extended in his kennel and never move except when fed, then he would only raise his head, gulp his food, and assume again the same position. He was evidently suffering acutely, for he howled night and day. The owner was advised to have the animal destroyed, as other cancerous growths besides the one already mentioned were suspected, and also from the pitiable suffering and poor condition.

This was agreed to, and on post mortem examination three tumors were found—the first, rounded, flattened above and below, was situated at the crus penis, its weight six ounces; the second, the largest of all, was attached to the mesentery at the sublumbar region. It was ovoid in shape, and was very richly supplied with blood vessels. The surrounding lymphatics were all engorged and enlarged te three times their normal size. The third tumor, already mentioned, was situated on the upper part of

the pelvis, and communicated with the rectum by a small fistulous tract, thereby explaining the discharge of pus per anus.

These tumors did not, in all probabilivy, exist when the animal was operated on before, but subsequently, for the rectum at the time was carefully explored and nothing detected; also, the rapid improvement after the incisions healed points to this supposition.

The fact of their subsequent formation can be readily understood: some cancerous germs were absorbed and deposited in the different places where these tumors were found.

A CASE OF PARONYCHINA IN THE HORSE.

Some time ago a very interesting case was discharged convalescent from the hospital of the American Veterinary College.

The subject was a fine gray Norman gelding, 8 years old and 15.2 hands high.

The history of the case was that he had been worked the day previous, and had been placed in his stall at night apparently perfectly well; when seen in the morning he was standing up with his near fore-foot elevated from the ground and unable to move. He was brought to the hospital in an ambulance, and when the foot was examined, from the fetlock to the hoof it was greatly swollen, of a dark red appearance, very tender on the slightest pressure, and the animal unable to sustain any weight upon it. No wound of any description could be detected.

The constitutional symptoms were very severe, the temperature being 105 deg., the pulse strong, hard, and frequent, and the respiration accelerated, together with complete loss of appetite. The shoe was removed, and the animal placed with his fore feet in cold water.

April 10th.—The next morning the general condition was about the same. The sole and frog were thinned away, as there was tenderness on pressure, and it was feared that there might be suppuration, resulting from a bruise of the foot, or from the application of a red-hot shoe. No pus was detected, the parts

were dressed with pads of oakum saturated with carbolic solution, and the feet again placed in cold water; alcohol stimulants were given, and a varied diet.

April 11th.—Fluctuation was distinctly manifest in the posterior part of the coronet, and it was freely opened; a large quantity of thick brown pus, with shreds of aponeurosis and cellular tissue escaped. Dressed with carbolized oakum with a hot poultice to stimulate the suppuration.

April 12th.—The skin from the fetlock to within half an inch of the heel, and from the lateral face of the coronet on the outside to the anterior face of the same, was gangrenous and about to slough. It was removed, leaving the tendon of the flexor perforans exposed, and the vein, artery and nerve on the inside, altogether a large irregular granulating surface. The antiseptic spray was used for fifteen minutes twice during the day, and the parts dressed with oakum and a bandage.

April 13th.—The patient eats much better; reacting fever has passed away; can bear some weight upon the foot; sloughing of the vein, artery and nerve on the inside.

April 14th to 16th.—Sloughing of more skin and the perioplic ring. Pus was detected under the sole; opened, and pus evacuated, and diseased laminæ and plantar cushion removed; same dressing.

April 18th to 21st.—A fistulous tract extending from the superior part of the wall on the inside to the sole was found and opened; discharge healthy; a three-quarter shoe tacked on and bottom of foot dressed with plates; pressure applied to the upper wound, which is granulating nicely.

April 22d.—The sole on the inside removed, escape of much pus; appearance of a slight tendinous synovial discharge.

April 23d to May 12th.—Parts doing well, upper wound rapidly filling up and closing in from the edges; lower wound doing well; is kept relieved from pressure by thinning the horn around it, and a dressing of oakum saturated with aloes and carbolic sal. applied.

26th.—Parts dressed every other day; the spray continued all the time; the superior wound presents an even granulating surface;

surrounded by cicatricial tissue; the bottom wound entirely healed; there is very little disfiguration of the digit; animal but slightly lame; discharged and ordered to be brought back occasionally to be dressed.

There has been no similar condition recorded in English veterinary literature that I have been able to find. The symptoms presented and the complications which ensued resemble the condition described in human surgery as paronychia of the variety that is seated in the subcutaneous alveolar tissue, which arises from no appeciable cause, runs an acute course, and has a tendency to suppuration, gangrene and sloughing.

The pain manifest and the appearance of the primary swelling in this case were identical with it, together with the reacting fever.

PULMONARY APOPLEXY IN A DEER.

This animal was sent from the Central Park to be examined, having suddenly died on the 7th inst.

The chief lesions were found in the thoracic cavity. The external surface of the lungs was dark colored, almost black. The pulmonary vessels were intensely congested, and some of the capillaries were ruptured, allowing an extravasation of blood into the parenchyma, and some of the other vessels were plugged with emboli.

On section, the lung tissue presented dark colored vessels filled with tarry blood, while here and there interspersed throughout were dark patches of extravasation.

The lungs were heavier than normal, sinking deeply in water, and were less crepitant to the touch than usual.

The right auricle was engorged with dark colored blood, and the right ventricle and the large vessels also were filled with clotted blood. The left side of the heart was empty.

Cause of Death.—Pulmonary apoplexy, induced by the excessively warm weather of the two previous days.

SOCIETY MEETINGS.

NINETEENTH ANNUAL MEETING OF THE UNITED STATES VETERINARY MEDICAL ASSOCIATION.

The regular annual meeting of this Association met in the lecture-room of the American Veterinary College, September 20th, at 11:45 A. M., the President, Prof. James L. Robertson, in the chair. Twenty-five members were present.

The Comitia Minora, in their report to the Association, recommended the following gentlemen as candidates for membership: John Dougherty, D.V.S.; R. H. Harrison, D.V.S.; M. Bunker, D.V.S.; J. E. McNicol, D.V.S.; D. J. Dixon, D.V.S.; W. W. Burt, D.V.S.; Jos. Bushman, M.R.C.V.S.; Fred. H. Osgood, M.R.C.V.S.

The minutes of the last meeting were read and adopted.

Reports of committees being next in order, the Association was favored by the Chairman of the Committee on Education and Intelligence with a report of the condition of veterinary medicine at the present time.

The action taken some time ago by the War Department in appointing none but regular graduates of recognized schools was referred to as a step in the elevation of our profession. It is, however, unfortunate, that the veterinarian's rank and pay is not better. In civil life we find a just recognition of our services. The report further stated that New Jersey had recently appointed a veterinarian as meat inspector, and concluded by urging the Association to use its endeavor to place veterinary colleges in the United States on an equality with those of Europe.

The Treasurer's report was then read and accepted. Some funds that came into the hands of the Editor of the AMERICAN VETERINARY REVIEW, after the action taken by the Association in regard to that journal at the March meeting, will be placed in the hands of the Treasurer.

Communications were received from Drs. Thayer, Colsson and Blakeley.

The candidates recommended by the Comitia Minora were balloted for and admitted as members.

Applications for membership were presented by the following gentlemen: Messrs. Michael W. Birch, Jas. McCoart, Jas. A. Marshall, Robt. Gladfetter, Wm. A. Birch, Chas. S. Devlin, Jas. J. Jimberman.

The following officers were elected for the ensuing year: President, W. Bryden; Vice-President, L. McLean; Secretary, C. B. Michener; Treasurer, Chas. Burden; Censors, Drs. Liautard, Lyman, Lockhart, J. S. Saunders, Robertson and Michener.

The President, on taking the chair, thanked the Association for the honor conferred, and pledged himself to work zealously in the interests of the Association.

On motion of Dr. L. McLean, it was resolved that after the present year the annual dues to the society should be $2.00, the initiation fee remaining the same as heretofore—*i.e.*, $5.00.

On motion, the names of all those whose initiation fees had not been paid were dropped from the roll.

Sections 2 and 3 of Article 8 were referred to the Committee on Intelligence and Education, with directions to report at the March meeting.

The names of John Duane, Jr., D.V.S., and F. W. McClellan, V.S., were added to the list of applicants for membership.

Drs. J. E. McNicol, L. McLean and Robertson were appointed a committee to draft a preamble and resolutions expressive of the society's deep sorrow at the death of President James A. Garfield.

The paper presented to the meeting by Dr. Holcombe on army veterinary medicine, etc., was ordered printed in the REVIEW, and that the committee to whom it was referred report what further action it may be deemed best to be taken at our next meeting.

Dr. Lyman detailed the post-mortem appearances of the so-called Nova Scotia cattle disease. It is to be hoped that at some future time the society may be favored with a paper on the subject by Dr. Thayer or Prof. McEachran—both of these gentlemen having investigated the matter.

The time for adjournment having arrived, most of the members and their guests repaired to the annual dinner at Delmonico's.

C. B. MICHENER, *Secretary.*

IN MEMORIAM.

Jas. A. Garfield, President U. S.

At the annual meeting of the United States Veterinary Medical Association, held in this city, Tuesday, September 20, 1881, the following preamble and resolutions were adopted:

Whereas, In the dispensation of Providence we are called to mourn the loss of the chief executive officer of the Nation, stricken down by the hand of the assassin while in the prime of an honorable manhood, in the full plenitude of power, and at the outset of a career that argued well for the peace and prosperity of our common country, and

Whereas, In this sad affliction, which in some degree has become the heritage of the people, while we may not understand the inscrutable ways of God in this National bereavement, still we take hope and courage for the future in the assurance that "God reigns." The dead in these memorable words yet speaks.

Resolved, That in this calamity, which the whole people had fondly hoped would be averted, a four-fold cord has been broken, the aged mother loses a son, the wife a husband, the children a father, the country its President.

Resolved, That while sorrowing, yet not without hope, while paying our tribute of affection to the Nation's dead, we tender our loyal support to him who has been called to assume the direction of Governmental affairs.

Resolved, That we further tender our sincere and heartfelt sympathy to the family of our late President, who, through this season of trial and suffering, have borne themselves with a becoming fortitude. A light has been extinguished in the household, but the influence of a good man radiates even after death.

Resolved, That a copy be forwarded to the family, and that they be published in the daily papers.

NEWS AND SUNDRIES.

During the recent heated term in Paris upwards of 200 omnibus horses died within a week.—*American Cultivator.*

Prof. D. McEachran, one of the members of the "Cochrane Ranche Co.," is reported to have expressed a very favorable impression of the Northwest for cattle raising. That company recently brought from Montana 9,000 head, and some pure breed bulls, short horn, polled Angus and Hereford.

There are thirteen million cows in the United States. This is more than are kept by any nation of Europe, Germany having the highest, 8,962,221.—*Farm and Home.*

A Wonderful Ewe.—Mr. Matthew Scott, of England, has a crossed Blackface and South Down ewe, twenty-one years old, that has reared *thirty-six* lambs. We think this animal ought to be put on the British pension list for the remainder of her life.—*Nat. Live Stock Journal.*

The Australians have a very stringent law for the eradication of scab in sheep. They have "State Scab Inspectors," whose business it is to see that the law is enforced. Every sheep owner who discovers indications of scab in his flock is obliged to notify all flock masters within a certain radius, of the fact, and also to post notices in public places. If the disease is not stamped out within 90 days, the diseased animals must be killed. The result has been that scab has almost disappeared from Australian flocks. —*The Prairie Farmer.*

Caponizing fowls is practised to a great extent in Pennsylvanio and New Jersey. Its effect upon the fowls is that they grow one-third beyond their otherwise natural size, fatten more easily and rapidly on less food, and their flesh is of finer quality, the price they command in the market being 50 per cent. higher than that of ordinary fowls of the same age. As an illustration of their superiority, we quote from an exchange of a recent date the statement that "a man in New Jersey has just sold a lot of 250 capons, averaging 10 3-5 lbs. each; the heaviest pair weighing 28 lbs."—*Mass. Ploughman.*

THERE appeared during the month of August, on the farm of Mr. F. Balis, Dutchess Co., N. Y., a disease among the cattle that, from report, closely resembles some form of anthrax. Five cows in all have died. The stream supplying the cattle with drink comes from a marshy region where a great number of tenement houses are situated. Animals on this same farm have suffered similarly during recent years.

— COL. MASON, in speaking of restrictions on American pork, says:

"The widespread prejudice against American meats can be adequately met and overcome only by a rigid system of official inspection by competent experts, appointed by the National or State Government, and empowered to use a seal or other device representing Governmental authority. In the European mind, an official seal is inferior in potency only to the edict of Royalty itself. American pork of all kinds is conceded by intelligent and fair-minded dealers to be the best in the market, and it is growing better year by year, as the methods of curing and packing for European consumption are improved. Through a combination of adverse interests and misfortunes, for some of which careless and avaricious American exporters have been responsible, these meats are temporarily under suspicion; but there is apparently no difficulty in the present situation which a prompt, positive, and thorough policy may not meet and overcome. I beg to repeat that, in my opinion, the European traffic in American salted meats can never be fully restored until a system of official inspection is established, which shall carry with it the weight and force of Federal or State authority. * * * * Until some system of this description is adopted, the one per cent. of trichinous hogs which is conceded to exist in the United States will prove a serious obstacle to the maintenance and further development of our export trade in meats. The European meats with which our own come into competition are nearly all officially inspected, and until American hams and bacon bear the official examination, they will be, in presence of existing prejudices, at a serious disadvantage in the markets of the Old World. It is within the

power of the American meat exporters to turn the momentarily disastrous pork panic of 1881 into an opportunity for making their meats more widely and favorably known than ever before. They are fighting a defensive battle, but they can win it."

SHIPMENTS WEST OF EASTERN CALVES.—The recently-appointed "Treasury Cattle Commission" have issued the following circular, addressed especially to the Governors of the States and Territories west of the Alleghanies:

OFFICE OF THE UNITED STATES
TREASURY CATTLE COMMISSION,
CHICAGO, Aug. 23, 1881.

Dear Sir—The "Treasury Cattle Commission" appointed by the Secretary of the Treasury, in pursuance of an act of the last Congress, deem it their duty to call your attention to the imminence of the danger to which the herds in the States and Territories west of the Alleghanies are exposed from the traffic in dairy calves, which is becoming a very common one between these States—now happily exempt from the contagious pleuropneumonia of cattle—and the infected districts. That a very large proportion of our country has, up to this time, remained exempt from this dangerous malady, is owing chiefly to the fact that the current of our cattle traffic has heretofore been mainly from the West toward the seaboard; but the business of purchasing calves from the eastern dairy districts and scattering them throughout the Western States and Territories, which has, within a year or two past, assumed such mammoth proportions, has augmented the danger to which the uninfected districts are exposed tenfold; and if it is permitted to go on unchecked, the danger of a general infection of the great cattle growing and grazing regions is imminent.

We, therefore, call upon you to use whatever influence you may legitimately bring to bear upon the people of your State to discountenance and discourage a traffic that is fraught with such danger to their material interests. The district known to be infected with the scourage embraces pretty much the whole of the country bordering on the coast, from New York city southward to Washington city, and extending to a greater or less distance

inland; but the commission would recommend that until a more thorough examination can be made, and a complete isolation of infected herds can be secured, every possible means that can be legitimately resorted to should be brought to bear to discourage and prohibit traffic in cattle from anywhere near the infected regions.

JAMES LAW,
E. F. THAYER,
J. H. SANDERS,
Commissioners.

—*The Cultivator and Country Gentleman.*

EXCHANGES, ETC., RECEIVED.

FOREIGN.—Veterinarian, Veterinary Journal, Clinica Veterinaria, Revue fur Thierheilkunde und Thierzucht, Archives Veterinaires, Recueil de Medecine Veterinaire, Journal de Zoötechnie, Revue Dosimetrique, Presse Veterinaire, Annales de Belgique.

HOME.—American Agriculturist, Turf, Field and Farm, Prairie Farmer, National Live Stock Journal, Medical and Surgical Reporter, Medical Record, Maine Farmer, New York Times, Journal of Agriculture.

JOURNALS.—Iowa Farmer, Ohio Farmer, Practical Farmer, Ploughman, American Cultivator.

CORRESPONDENCE.—W. H. Hoskins, W. F. Derr, N. S. Townshend, M.D., Robt. Harrison, C. B. Michener, A. A. Holcombe.